

**Notice of Allowability**

Application No.

10/045,522

Applicant(s)

THENGVALL ET AL.

Examiner

Art Unit

Romain Jeanty

3623

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/22/06.
2. ☒ The allowed claim(s) is/are 1-3,6-8 and 10.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 3/25/02; 8/26/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Romain Jeanty  
Primary Examiner  
Art Unit: 3623

**Allowable Subject Matter**

1. Claims 1-3, 6-8, and 10 are allowed.

**Reasons for Allowance**

2. The following is an examiner's statement of reasons for allowance:

The closest prior art is Sato et al (U.S. Patent No. 6,651,0460. Sato et al discloses an optimizing method for optimization, the total number of crew required for flight services and a crew pairing model calculation unit for calculating a fitness of a solution. However Sato et al fail to teach extracting said first memory objects and said second memory objects to form an open pairing model, formulating said open pairing model into an integer program data structure to simplify said open pairing model for solution, and generating said multiple solutions based upon said integer program data structure to cure said n open pairings, wherein said integer program data structure is provided by an integer program represented by the formula recited in claim 1 above.

Claims 2-3, 6-8, and 10 depend from independent claim 1; therefore claims 2-3, 6-8, and 10 are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Craig (WO00/067179) discloses a system of creating staff schedules.
- b. Yu et al (EP1072991A2) disclose an automated real-time crew optimization engine for repairing crew problems.
- c. Castonguay et al (WO9207318) discloses a method for scheduling, planning and managing personnel.
- d. Rushmeier (Recent Advances in Exact Optimization of Airline Scheduling Problems) discloses the concept of using mixed-integer programming for airline scheduling.

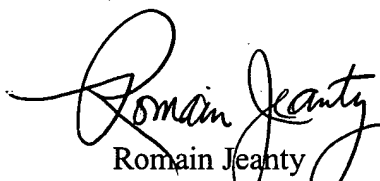
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Romain Jeanty whose telephone number is (571) 272-6732. The examiner can normally be reached on Mon-Thurs 7:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 27, 2006

  
Romain Jeanty  
Primary Examiner  
Art Unit 3623